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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/984,059	12/03/1997	JUN IL SONG	2743-0104P	1731
2292	7590	03/22/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			ALPHONSE, FRITZ	
			ART UNIT	PAPER NUMBER
			2675	21
DATE MAILED: 03/22/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No. <b>08/984,059</b>	Applicant(s) <b>Jun IL Song</b>	
Examiner <b>FRITZ ALPHONSE</b>	Art Unit <b>2675</b>	

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1)  Responsive to communication(s) filed on Sep 2, 2003.
- 2a)  This action is FINAL.      2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- 4)  Claim(s) 39-41 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 39-41 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12)  The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13)  Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All b)  Some\* c)  None of:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
  - a)  The translation of the foreign language provisional application has been received.
- 15)  Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcade (U.S. Pat. No. 4,646,528) in view of Yamazato (U.S. Pat. No. 5,555,189) and further in view of Ledbetter (U.S. Pat. No. 4,821,530).

As to claim 39, Marcade (figs. 1, 2) show an external display device of a refrigerator (10) comprising: a display unit 34 (fig. 2; 34 a-b) on a door (14) in the refrigerator (10), showing information on the state of the refrigerator; at least one user-select key 36 (36 a-d, 1, f-j) on the door (14); a sub control unit (42, fig. 3) at the door, said sub control unit receiving and transmitting signals generated by pressing the key and controlling the display unit; a hinge unit (see figure 1) mounted on the refrigerator and supporting the door (14).

Marcade does not teach a main control unit at a main body of the refrigerator.

However, in the same field of endeavor, Yamazato (figs. 1-7; col. 15-16 specially col. 15, line 54) teaches distributed controller.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine Marcade with the communication system, as disclosed by Yamazato. Yamazato is directed to reducing the number of wires. It would have been obvious to reduce the

number of wires of Marcade (shown in fig. 3) as motivated by Yamazato, so as to permits a reliable control system for internal devices within electric devices.

In addition, as to claim 1, Marcade does not teach about communication means passing through the hinge unit.

Ledbetter, however, teaches passing a cable through a hole in the hinge of a refrigerator as shown in fig. 9, cable 84 passes through hollow hinge 72, 78, 80; see col. 3, lines 24-50 and figure 9 and 10.

It would have been obvious to wire the external display of Yamazato and Marcade by passing voltage supply and/or data signal lines through the hole in the door hinge of the refrigerator to prevent wear on the connecting wires. As suggested by Ledbetter, it is now possible to place this small number of wires through the hinge; by passing the wires through a hole in the hinge flexing of the cables will be reduced (see col. 3, lines 46).

As to claim 40, Yamazato teaches that the main control unit (20) and the sub control unit (25) communicate with each other in serial data transmission (see col. 25, lines 23-39; col. 26, lines 15-28).

As to claim 41, Yamazato teaches that the main control unit and the sub control unit communicate with each other in asynchronous serial data transmission (note Yamazato (fig. 8) teaches about a first transmission means for transmitting a message to each sub-control section 25 through I/F circuit 24). See col. 16, lines 63 through col. 17 line 5.

#### *Response to Arguments*

3. Applicant's arguments see amendment D, filed 7/01/03, with respect to the rejections of claims 39-41 have been fully considered.

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Applicant argues that (see page 7 of Remarks) "independent claim 39 recites a combination of elements in an external display device of a refrigerator, including a display unit on a door in the refrigerator... a sub control unit at the door... a main control unit at a main body of the refrigerator..."; and submits that "this combination of elements as set forth in independent 39 is not disclosed or made obvious by the prior art of record".

In that regard, the examiner disagrees with this statement because Marcade (figs. 1, 2) show a display unit 34 (fig. 2; 34 a-b) on a door (14) in the refrigerator (10); a sub control unit (42, fig. 3) at the door. In addition, Yamazato (figs. 1-7; col. 15-16 specially col. 15, line 54) teaches distributed controller (i.e., main control unit). See the rejection above.

Applicant argues that Yamazato discloses stand-alone terminal units 60.

The rejection has changed and we are no longer relying on display unit 60.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703) 308-8534. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven J Saras can be reached on (703) 305-3900.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks Washington, D.C. 20231

**or faxed to: (703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

  
F. Alphonse

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March 18, 2004



STEVEN SARAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600